

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference B0877.70027	FOR FURTHER ACTION <div style="float: right; font-size: small;">see Form PCT/ISA/220 as well as, where applicable, item 5 below.</div>	
International application No. PCT/US04/15443	International filing date (<i>day/month/year</i>) 17 May 2004 (17.05.2004)	(Earliest) Priority Date (<i>day/month/year</i>) 29 January 2004 (29.01.2004)
Applicant BROWN UNIVERSITY		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the Report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).



- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2.



Certain claims were found unsearchable (See Box No. II)

3.



Unity of invention is lacking (See Box No. III)

4.

With regard to the **title**,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5.

With regard to the **abstract**,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6.

With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 1



as suggested by the applicant.



as selected by this Authority, because the applicant failed to suggest a figure.



as selected by this Authority, because this figure better characterizes the invention.



- b. none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US04/15443

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61F 2/06, 2/00, 2/02, 13/00; A61M 5/00; C12N 5/00, 5/06, 5/08
US CL : 623/1.1, 1.42, 11.11, 23.75; 424/422, 93.1, 93.7; 435/325, 366; 604/27

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 623/1.1, 1.42, 11.11, 23.75; 424/422, 93.1, 93.7; 435/325, 366; 604/27

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPat, USPGPub, EPO, JPO, Derwent

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Medline, CAPLUS, Biosis

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	MURAYAMA, et al. Determination of bone marrow-derived endothelial progenitor cell significance in angiogenic growth factor-induced neovascularization in vivo. Exp Hematol. August 2002, Vol 30. Iss 8, pages 967-972.	2, 11, 13, 14, 27-30, 42
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Y		1-7, 9-17, 21-24, 27-30, 39-40, 42
Y	US 2003/0007954 A1 (NAUGHTON et al) 09 January 2003 (09.01.2003), whole document	1-7, 9-17, 21-24, 27-30, 39, 40, 42
Y	US 6,340,588 (NOVA et al) 22 January 2002 (22.01.2002), column 74, lines 4-15.	1, -7, 9-17, 21-24, 27-30, 39, 40, 42
A	RAFII et al. Therapeutic stem and progenitor cell transplantation for organ vascularization and regeneration. Nature Medicine. June 2003, Vol. 9. No. 6, pages 702-712.	1-43
A	RAFII et al. Characterization of hematopoietic cells arising on the textured surface of left ventricular assist devices. Ann Thorac Surg. 1995, Vol. 60, pages 1627-1632.	1-43
A	RAFII et al. Efficient mobilization and recruitment of marrow-derived endothelial and hematopoietic stem cells by adenoviral vectors expressing angiogenic factors. Gene Therapy. 2002, Vol. 9, pages 631-641.	1-43

☒ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

10 December 2004 (10.12.2004)

Name and mailing address of the ISA/US

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Date of mailing of the international search report

28 FEB 2005

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US04/15443

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	HATTORI et al. Vascular Endothelial Growth Factor and Angiopoietin-1 Stimulate Postnatal Hematopoiesis by Recruitment of Vasculogenic and Hematopoietic Stem Cells, J. Exp. Med. May 2001, Vol. 193. No. 9, pages 1005-1014	1-43
A	YOUNG et al. VEGF increases engraftment of bone marrow derived endothelial progenitor cells (EPCs) into vasculature of newborn murine recipients. PNAS. September 2002, Vol. 99. No. 18, pages 11951-11956.	1-43
A	TATEISHI-YUYAMA et al. Therapeutic angiogenesis for patients with limb ischaemia by autologous transplantation of bone-marrow cells: a pilot study and a randomized controlled trial. Lancet. August 2002, Vol. 360, pages 427-435.	1-43
A	SHI et al, Evidence for Circulating Bone Marrow-Derived Endothelial Cells. Blood. July 1998, Vol. 92. No. 2, pages 362-367.	1-43